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COMMANDER OPERATIONAL TEST AND EVALUATION FORCE
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POLICY AND INFORMATION NOTICE (PIN) 10-01

Subj: OPERATIONAL REPORTING GUIDANCE AND PROCEDURES

Ref: (a) COMOPTEVFORINST 3980.1, Operational Test Director's Manual
(b) COMOPTEVFOR PIN 09-01

Encl: (1) Operational Test Report Construct and System Evaluation Review Process

1. PURPOSE. This notice updates reference (a) guidance for processes and procedures for system evaluations of Operational Effectiveness and Operational Suitability (OE/OS) of the contribution of the System Under Test (SUT) to the system-of-systems warfighting effect and a separate OE/OS determination for the system-of-systems capability to perform its mission in the operational environment.

2. BACKGROUND. The complexity of SUTs has evolved significantly in recent years. Previous methods of reporting, deficiency determination, and Critical Operational Issue (COI) resolution are challenged to produce repeatable, defendable, and robust results. In addition, the complexity of mission threads makes it more difficult to properly report on the contribution of the SUT to the overall system-of-systems warfighting effect. This evolution of systems has precipitated new methods and best practices to improve reporting.

3. GUIDANCE. Methods and procedures outlined in enclosure (1) shall be used for all Operational Test (OT) reports with the exception of Developmental Test (DT) assist letters.

4. IMPLEMENTATION. This policy supersedes reference (b) and is effective immediately.

5. This PIN will be incorporated into the upcoming revision of reference (a).

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Distribution: (COMOPTEVFORINST 5216.2R)
List I, III

Operational Test Report Construct and System Evaluation Review Process

1. INTRODUCTION. OTs will be derived from joint capability areas using Mission-Based Test Design (MBTD) whenever possible. That process will create operational vignettes that are composed of a system-of-systems to include the SUT. Operational Test and Evaluation Force's (OPTEVFOR) evaluative process must segregate issues discovered during OT into SUT issues and broader Warfighting Effect (WE) issues. SUT issues are those issues directly linkable to what the sponsor has funded the Program Manager (PM) to develop and field. WE issues are those issues that, while not traceable back to the required SUT capability to be delivered, are related to the system-of-systems required to create the desired warfighting effect. System evaluations of OE/OS shall be made on the contribution of the SUT to the system-of-systems warfighting effect, and a separate OE/OS shall be provided for the system-of-systems capability to perform its mission in the operational environment. The intent of this guidance is to implement a standardized, repeatable process for OT reporting of all findings, while recognizing that every program is unique and subjective judgments will still be required.

2. DEFINITIONS. The Operational Test Director (OTD) shall use the following definitions for SUT and WE issues.

a. SUT. A SUT is defined by either specified or derived requirements that the Navy sponsor has funded the PM to deliver. The SUT evaluation shall be based on the contribution of the SUT, as defined by specified and derived requirements, to the system-of-systems warfighting effect. SUT specified or derived requirements issues identified during test shall be characterized as risks (Early Operational Assessment (EOA) and Operational Assessment (OA)) or deficiencies (Initial Operational Test and Evaluation (IOT&E) or Follow-on Operational Test and Evaluation (FOT&E)). SUT issues will be used in the risk assessment/resolution of appropriate COIs, SUT OE/OS determinations, and fielding recommendations.

(1) Specified Requirements. Specified requirements must be clearly documented in the system's capabilities document (operational requirements document, capabilities development document, capabilities production document, functional requirements document, etc.) and must be either:

- A Measure of Effectiveness (MOE) and Measure of Suitability (MOS) performance threshold (not objective), or
- Any capability stated as a shall or will statement.

(2) Derived Requirements. Derived requirements are any requirements not clearly stated in the system's capabilities document that are necessary for the effective delivery of the SUT capability as defined in the capabilities document, or are derived from:

- Concept of operation
- Office of the Secretary of Defense/Joint Chiefs of Staff/Secretary of the Navy/Office of the Chief of Naval Operations instructions
- Threat documents
- SUT specifications
- System stakeholders agreed upon capability/function to be delivered (Navy sponsor's intent for funded capability).

b. WE. WEs are any capability or issue not already captured as a specified or derived requirement that is necessary for mission accomplishment of the SUT when operating in the system-of-systems environment. This includes those capabilities:

- Identified as MOE and MOS performance objectives that adversely impact SUT mission accomplishment, or
- Required for the full employment of the SUT in its intended system-of-systems operating environment.

(1) WEs will inform operational commanders of significant issues that need addressing to achieve full mission capability of the SUT.

(2) WEs will be characterized as WE risks (EOAs and OAs) or deficiencies (IOT&E or FOT&E). WEs will be used in the risk assessment/resolution of appropriate COIs and the determination of system-of-systems OE and/or OS.

c. Operational Consideration (OPCON). In the context of the redefined report construct, OPCONs have been narrowly defined. OPCONs document tactical considerations which inform operational commanders of significant aspects (pro and con) of

system employment, or make clear what special measures would be required to make the system more efficient in battle.

3. EVALUATIVE PROCESS. This guidance establishes a standardized, repeatable evaluative process across all warfare domains, for all reports (with the exception of DT assist) to classify issues, characterize risks/deficiencies, make overall COI assessments or resolutions, and make recommendations for each issue. This process, to include the new System Evaluation Review Board (SERB), is presented in chronological order.

a. Test Planning. The evaluative process begins with test planning. Test design task decomposition shall include identification of SUT-specified requirements, derived requirements, or WE attributes. This effort shall be coordinated and collaborated with the SUT stakeholders (i.e., sponsor and PM). In areas of disagreement, the final determination of whether a capability/task/subtask is a SUT or WE attribute to be used for OT evaluation is the prerogative of the OT community. The goal is to have all SUT and WE attributes identified prior to testing to ensure that SUT evaluation criteria are clearly understood by all stakeholders.

b. During Test

(1) SERB Spreadsheet. Document system performance issues identified during test execution into SUT (specified or derived) or WE issues using the system evaluation spreadsheet, appendix (a). This spreadsheet contains information required for use by the SERB deliberations. Specific data fields and guidance for the desired content of each field are included in the spreadsheet.

(2) Six-Part Paragraph (6PP). Use of the 6PP in OT reports is now mandatory. Drafting the 6PPs during test execution is critical to the evaluative process and for timely report approval.

(3) Data Sharing. As system performance issues are identified, the raw data and the issue shall be provided to the PM per reference (a) (paragraph 710) and Commander, Operational Test and Evaluation Force (COMOPTEVFOR) Standard Operating Procedure 02-1, Release/Sharing of Operational Test Data. The system evaluation spreadsheet may be provided to the PM, but shall be clearly marked as preliminary information and shall not include issue risk/deficiency or COI preliminary determinations or recommendations, as the evaluative process is immature and

data collection is incomplete. Feedback to the PM is important for several reasons:

- Enables the PM to begin addressing the performance issues identified as early as possible.
- Provides insight to the OT team as to causal analysis.
- Identifies additional data that may be available for system evaluation by COMOPTEVFOR.

c. Test Completion. Once it is clear that all necessary data collection is complete and has been received, the test completion message shall be issued. The OTD shall continue to document system performance issues using appendix (a). As soon as possible, but no later than 30 days following test completion, a SERB shall be convened. Details of the SERB are provided in paragraph 4.

d. Draft the OT Report. Once the SERB process is complete, the OTD shall complete any data analysis remaining and finalize the rough draft of the OT report, confident that the results and conclusions include the Commander's intent. Any new system performance issue identified following the SERB shall be addressed with SERB members as quickly as possible. This evaluative process shall continue until the OT report is approved by COMOPTEVFOR. The COMOPTEVFOR report templates have been updated to reflect the redefined OT reporting construct and are located in the Operational Test and Evaluation Reference Library and on the COMOPTEVFOR Knowledge Management System. Reference (a) 6PP writing style (paragraph 803) is mandatory for all COMOPTEVFOR OT reports.

(1) Interim Report. A SERB shall be conducted and briefed prior to writing an interim report.

(2) Initial Impressions Message. A SERB shall be conducted and briefed prior to writing an initial impressions message.

4. SERB

a. Overview. The SERB is a peer and senior COMOPTEVFOR leadership review of all system performance issues identified during test execution and data analysis. The SERB provides a repeatable process for evaluation of SUT and WE issues to ensure OT reporting evaluates the SUT and WE issues impacting the full realization of the SUT capabilities. The SERB results will be

briefed to the Admiral within 5-working days of SERB completion for approval or guidance.

b. SERB Membership. The SERB membership is as follows:

- Warfare Division A-Code*
- VX Commanding Officer or his designated representative* (if VX SUT)
- Warfare Division B-Code
- Policy Director*
- Execution Director*
- Other Warfare B-Code*
- Operational Test Coordinator (OTC)
- OTD*
- Division analyst
- Test Planning Cell (TPC) OT analyst.

* Minimum requirement for SERB to be convened

c. Convening a SERB. The Warfare Division B-Code shall schedule a SERB as soon as possible, but no later than 30 days following test completion, to include the minimum membership from paragraph 4b, and a suitable meeting location. Every effort shall be made to vary the visiting Warfare B-Code to ensure the effective spread of lessons learned across the command. The OTD shall provide read-ahead materials to all SERB members no later than 3-working days prior to the scheduled SERB (use of the Outlook calendar scheduling tool is encouraged), to include the filled out appendix (a) spreadsheet and the SUT overview slides, appendix (b).

d. Conduct of the SERB

(1) The purpose of the SERB is to conduct a review of the classification of issues, characterization of risk/deficiency level, logic leading to the overall COI assessment or resolution, and proposed recommendation for each issue.

(2) Every SERB shall start with a review of the definitions for specified and derived SUT requirements and WEs from appendix (c), the deficiency decision tree and deficiency definitions (appendix (d) and reference (a), figure 8-5), or the risk cube definitions for consequence and likelihood (appendix (e) and reference (a), paragraph 804) and the SUT overview slides (appendix (b)).

(3) Following the completion of the required introductory review, the OTD/OTC will lead the evaluative discussion of issues identified during test using the SERB spreadsheet, appendix (a). The OTD shall make adjustments to the spreadsheet as required, and document consensus or lack of consensus between the A-Code, the VX Commander (when appropriate), and the Policy Director.

e. SERB Outbrief to the Commander. The purpose of the outbrief is to inform the Commander and to receive the Commander's initial guidance concerning the SUT and WE issues, the COI assessment/resolution, and associated recommendations. The OTD/OTC shall provide a short SUT overview and a detailed briefing of the SUT and WE issues using appendixes (a) and (b). Particular attention shall be given to areas where SERB consensus was not reached.

f. Data Sharing. At the completion of the SERB, the system evaluation spreadsheet shall be shared with the PM, with the exception of the COI resolution. SERB risk/deficiency assignments may be provided to the PM. When distributed, the spreadsheets shall be clearly marked as preliminary information as data analysis continues.

5. ROLES AND RESPONSIBILITIES

a. OTD:

- With the OTC, make initial:
  - o Classification determination for issues identified during test planning, execution, and data analysis
  - o Issue assessment/evaluation (risk/deficiency level)
  - o COI resolution and associated rationale
  - o Recommendation for each issue.
- Write issues in 6PP format.
- Fill out the SERB spreadsheets.
- Lead the SERB discussion.
- Document the SERB results and brief to the Commander.
- Draft the final report.

b. OTC:

- Assist the OTD in above paragraph 5a responsibilities.

- Conduct working-level coordination with the developing agent and the requirements officer.
- Share data with the Program Office (Test and Evaluation Working Integrated Product Team) and the assistant PM.
- Review the final report.

c. Warfare Division B-Code:

- Schedule own warfare division SERBs, including the external participants and an appropriate conference room.
- Participate in own warfare division SERBs.
- Review the final report.
- Participate in SERBs for tests outside own warfare division as requested.

d. Warfare Division A-Code:

- Conduct coordination with the PM and the sponsor.
- Chair the SERB.
- Following the SERB, coordinate with the PM and the sponsor to discuss SUT and WE issue classifications that have not been resolved by the SERB and determine if additional data are available.
- Participate in SERB outbrief to Admiral.
- Review the final report.
- Participate in SERBs for tests outside own warfare division, as requested.

e. VX Commanding Officers (as appropriate):

- Participate in SERBs.
- Participate in SERB outbrief to Admiral.
- Review the final report.

f. Policy Director:

- Participate in SERBs.
- Participate in SERB outbrief to Admiral.
- Review the final report.
- Ensure policy standardization across all warfare divisions' system evaluations.

g. Execution Director:

- Participate in SERBs.
- Participate in SERB outbrief to Admiral.
- Review the final report.
- Ensure technical analytical rigor supports system evaluations.

h. TPC Analyst:

- Participate in SERBs.
- Provide feedback to OT framework and test plan development for SUT and WE classification and evaluation criteria.

Critical Operational Issue Resolution Table A-1
Appendix A

COI / Issue Short Name	Issue Description	ORD/CDD linkage or derived requirement source	Threshold	Result	SUT (Indicated whether specified or derived)	WE	Maj / Minor / Other Deficiency (Risks for OAs)	COI Resolution (List SUT only unless it differs fm SOS, then state resolution for both)	Rationale	Recommendation Category (Prior to IOT&E / Fielding / ASAP / Next OT)	A-Code	VX CO (as necessary)	Policy (Stan)
COI #1								SUT= SAT SOS=UNSAT	Rationale explaining COI assessment / resolution				
Issue #1	Spell out the issue	Identify page & paragraph from document	Threshold value, if appropriate	Observed results. Color is red if below threshold	Specified		Minor		Rationale explaining major / minor or risk level	Prior to FOT&E			
Issue #2		Page XX Para xx.x.x	500	400 hrs	Specified		N/A						
Data Corruption	Data loss or corruption can occur during unintentional power loss. Automated shutdown script is not incorporated.	CONOP	None	Uncontrolled shutdown during unintentional power loss.	Derived		Maj		No work around available	Next OT			
Issue #4		CONOP	N/A		Derived								
Issue #5	Spell out the issue					X	Maj						
Maintainability								SUT= UNSAT					
MCMTBOMF (sw)	MCMTBOMF does not meet Threshold	Page XX Para xx.x.x	<2 hrs	20 hrs	Derived		Maj		Unable to meet Ao due to how long to fix	Prior to Fielding			
COI #4								SUT=SAT					
Issue #6		Page & Para			Specified		Minor						
Issue #7						X	Minor						

Critical Operational Issue Risk Assessment Table A-2
Appendix A

COI / Issue Short Name	Issue Description	ORD/CDD linkage or derived requirement source	Threshold	Result	SUT (Indicated whether specified or derived)	WE	Degree of risk EOA/OA	COI Risk=highest individual risk (list SUT only unless it differs fm SOS, then state risk for both)	Rationale	Recommendation Category (Prior to IOT&E / Fielding / ASAP / Next OT)	A-Code	VX CO (as necessary)	Policy (Stan)
COI #1							Green=1 Yellow=2 Red=1	SUT=Yellow SOS=Red					
Issue #1	Spell out the issue	Identify page & paragraph from document	Threshold value, if appropriate	Observed results. Color is red if below threshold	Specified		3x4		Explain consequence and liklihood. Degrades SUT performance, but has workaround. No funding to fix	Prior to IOT&E			
Issue #2		Page XX Para XX.X.X	500	400 hrs	Specified		1x2			Next OT			
Data Corruption	Data loss or corruption can occur during unintentional power loss. Automated shutdown script is not incorporated.	CONOP	None	Uncontrolled shutdown during unintentional power loss.	Derived		4x3		Prevents mission.objective. No funds or plan to fix.	Prior to IOT&E			
Issue #4		CONOP	N/A		Derived	X	4x4						
Maintainability							Yellow=2 Red=1	SUT=Red					
MCMTBOMF (sw)	MCMTBOMF does not meet Threshold	Page XX Para XX.X.X	<2 hrs	20 hrs	Specified		5x3		Unable to meet Ao . Funds available, may fix prior to IOT&E	Prior to IOT&E			
Issue#5					Derived		4x2						
Issue#6						X	4x2						
COI #4							Green=1	SUT=Green					
Issue #7		Page & Para			Specified		2x2						

UNCLASSIFIED

Program Name

Decisional / Informational (select one)

Document Name

Date

Briefer / Code

UNCLASSIFIED

System Overview

- General System Description (give enough detail to let the board members understand)
  - What constitutes the system under test as described in the Capabilities Document
  - What Sponsor has funded PM to develop and deliver

Basic Information

- ACAT Level
- DOT&E Oversight
- Testing Stage (i.e., Pre-Milestone C)
- OTD/OTC Names
- PMA-XXX
- MDA
- Prime Contractor
- Operational Test Activity (i.e., VX-1)
- If a Joint Program, who is the Lead OTA?
- Other pertinent programmatic information

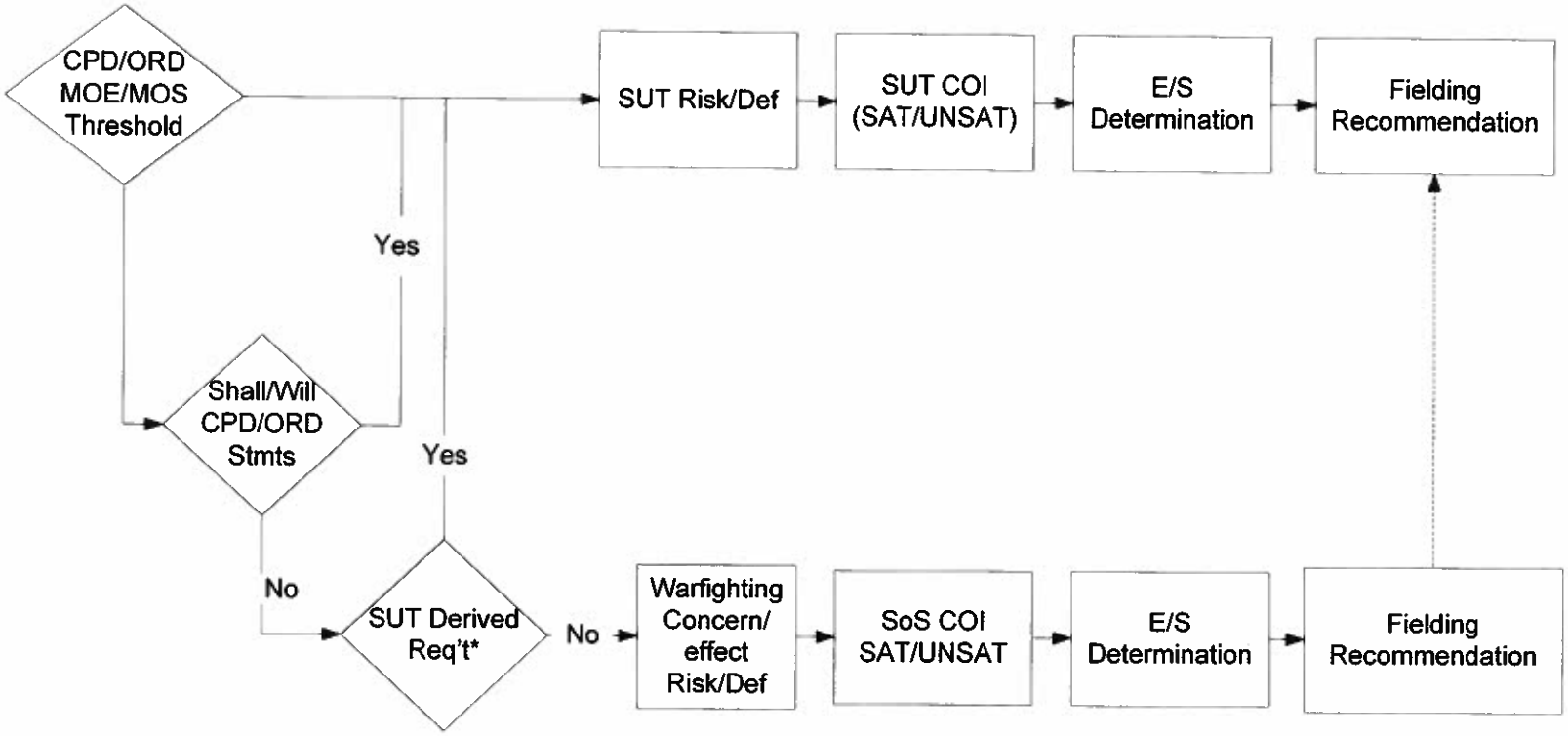
- Continue PPT brief as you see fit for system overview

Specified Requirement Definition

- Specified Requirements. Specified requirements must be clearly documented in the system's capabilities document (Operational Requirements Document, Capabilities Development Document, Capabilities Production Document, Functional Requirements Document, etc.) and must be either:
  - A Measure of Effectiveness (MOE) and Measure of Suitability (MOS) performance threshold (not objective), or
  - Any capability stated as a shall or will statement

Derived Requirement Definition

- Derived Requirements. Derived requirements are any requirement not clearly stated in the system's capabilities document that are necessary for the effective delivery of the SUT capability as defined in the capabilities document, or are derived from:
  - Concept of operation
  - Office of the Secretary of Defense/Joint Chiefs of Staff/Secretary of the Navy/Office of the Chief of Naval Operations instructions
  - Threat documents
  - SUT specifications
  - System stakeholders agreed upon capability/function to be delivered (Navy Sponsor's intent for funded capability)



*Necessary for effective operation of system as integrated on host platform

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Baseline Deficiency Decision Tree

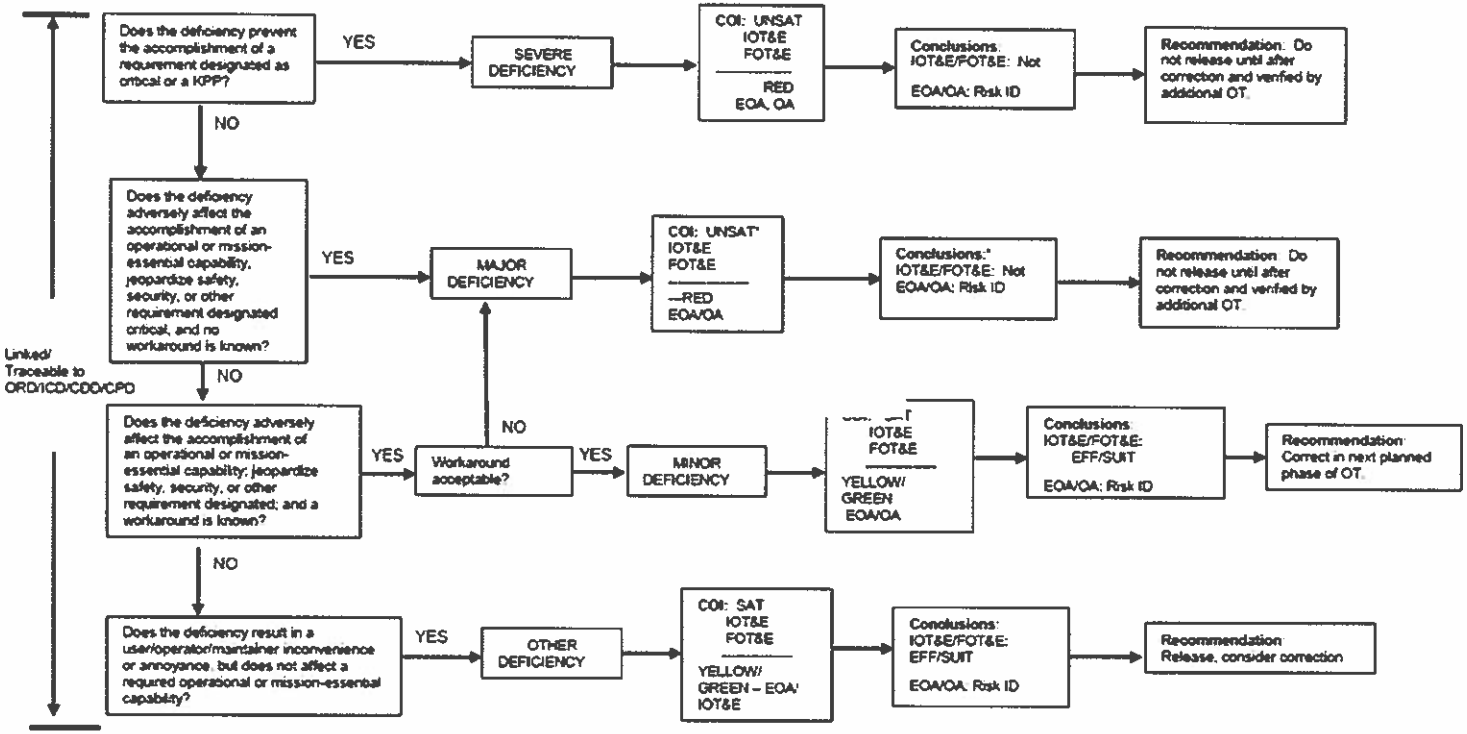

Figure 8-5. Baseline Deficiency Decision Tree

Deficiency Definitions

- **Severe:** Prevents the accomplishment of a requirement designated as critical to achievement of a KPP
  - Affected COI must be resolved UNSAT for IOT&E and FOT&E
- **Major:** Adversely affects the accomplishment of an operational or mission-essential capability, and no workaround solution is known
  - Affected COI should be resolved UNSAT for IOT&E and FOT&E
  - COI may be "split" to adequately clarify the specific issue that is deficient
  - Fleet introduction recommendation would have a caveat for additional test or certification by PM to CNO via COMOPTEVFOR prior to Fleet introduction beyond current Fleet usage
- **Minor:** Adversely affects the accomplishment of an operational or mission-essential capability, but a workaround solution is known
  - Affected COI may be resolved SAT for IOT&E and FOT&E
  - If the overall effect of "many" minor deficiencies is considered in the aggregate to be approximately equivalent to a major, then the OTD should consider a negative conclusion, with a caveat in the Fleet introduction recommendation

5X5 Risk Cube Consequence Definitions

Table 1. Mission / COI Impact Classification		
EOA / OA Mission Impact Level	**Descriptor**	**Issue Definition**
1	Minimal	Annoying system characteristic or nuisance which does not degrade operational/mission performance or suitability
2	Minor	Issue which degrades (but does not prevent) operational/mission performance or suitability but can be overcome with operator compensation/workaround
3	Moderate	Issue which degrades (but does not prevent) operational/mission performance or suitability, no acceptable operator compensation/ workarounds exists
4	Significant	Issue that prevents operational/mission performance or suitability, but can be overcome with operator compensation/workaround
5	Severe	Issue that prevents operational/mission performance, cannot meet mission objectives or suitability threshold, no workarounds available

5X5 Risk Cube Likelihood Definitions

Table 2. Likelihood of Occurrence at IOT&E / FOT&E				
		OTD's Estimate of likelihood of issue occurrence at IOT&E/FOT&E given the program's demonstrated maturity rate to date:	**Program Office Estimate of Impact to:**	
Level	**Descriptor**		**Future Schedule**	**Future Cost**
1	Negligible	One can reasonably assume no occurrence, and any correction should not be technically challenging within the current schedule prior to IOT&E.	Minimal or no impact	Minimal or no impact
2	Unlikely	Issue is possible but less than likely (10 – 40%) and should be easily corrected / mitigated prior to IOT&E AND program plans are currently in place to address it.	Additional program activities required, able to meet key dates	Program funding sufficient as allocated to correct issue
3	Likely	Issue has a significant chance of occurrence (40 – 65%) and may be corrected / mitigated prior to IOT&E AND program plans are not currently in place to address it.	Minor schedule slip, no impact on key milestones	Program funding adequate but reallocation necessary to correct issue
4	Highly Probable	Issue has a very high chance of occurrence (65 – 90%) and is deemed to be difficult to correct / mitigate prior to IOT&E.	Program critical path affected, impact to key milestones	Program funding not adequate
5	Near Certainty	Anticipate issue to occur (>90%) and is deemed nearly impossible to correct / mitigate prior to IOT&E unless substantial changes to the program are made.	Cannot meet key program milestones	